

The 39th KSCCM Annual Congress and Acute Critical Care Conference 2019

April 26(Fri) ~ 27(Sat) 2019

The-K Hotel Convention Center, Seoul, Korea

ACCC 2019
Acute Critical Care Conference

 The Korean Society of
Critical Care Medicine

FIELD HOSPITAL IN DISASTERS

CHOI WOOKJIN
EMERGENCY MEDICINE, ULSAN UNIVERSITY HOSPITAL

Introducing a speaker



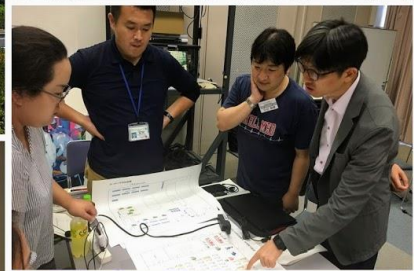
JDMAT FMT Training (2009)



JDMAT FTX Exercise (2009)



JDMAT Training Course (2017)



KDRT (Korean Disaster Relief Team) Education

2009~2014

KDRT in Tacloban (2013)



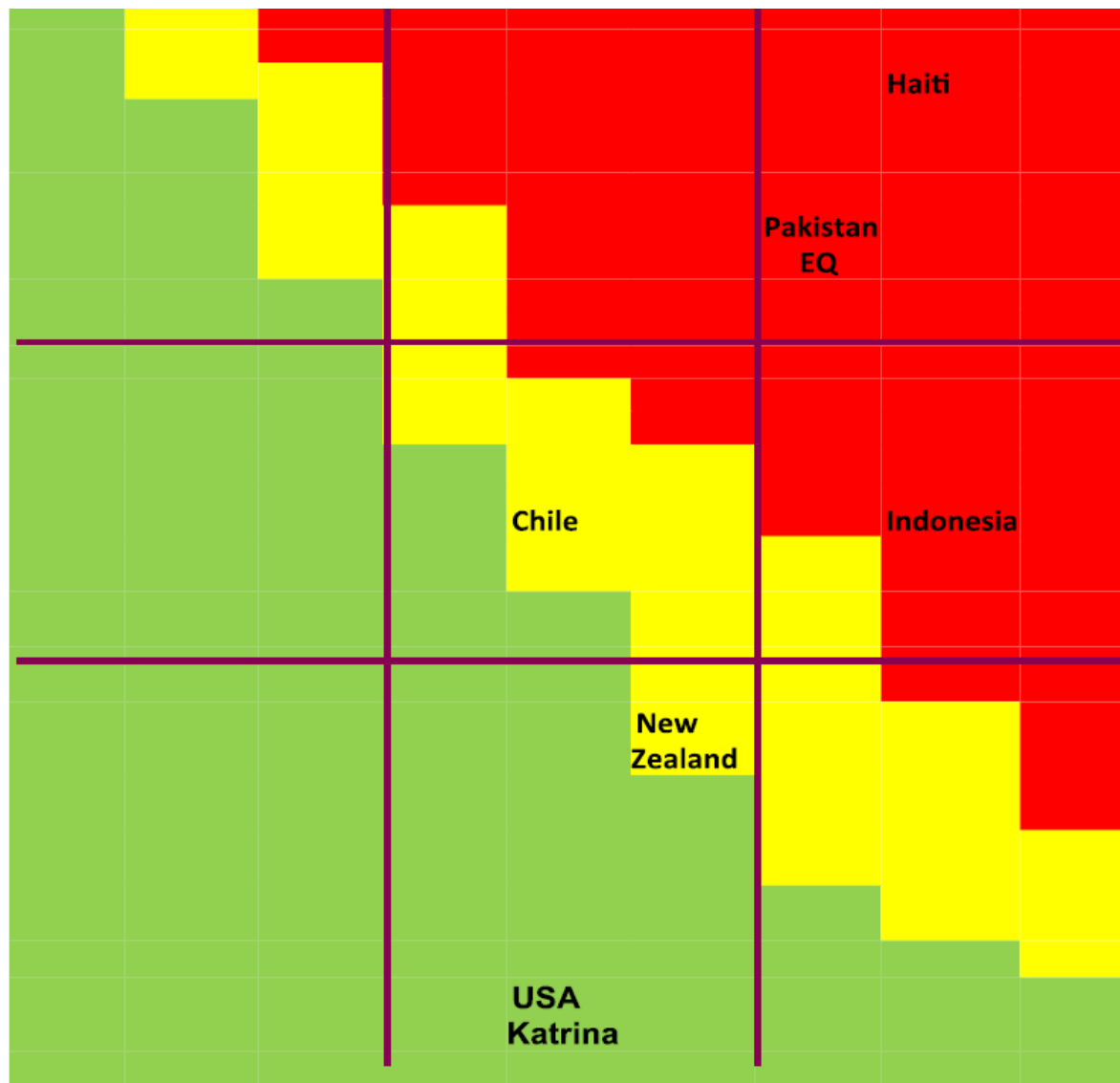
WHY DO WE NEED FMT?

Affected country income

Low Income

Middle Income

High Income



Severity of SOD

Minor

Moderate

Severe

Haiti

Pakistan
EQ

Chile

Indonesia

New
Zealand

USA
Katrina

International aid in disaster zones: help or headache?

- ❖ 2003, Earthquake in Iran, Bam
 - Food aids; religiously prohibited pork and ham
 - Brought coal heaters, coal is unavailable in Iran
 - Drugs without generic names
 - Used staples for suture, no instrument for removal

The Lancet; 2008



- Field hospitals equipped to provide emergency medical care for trauma are useful only if they are available and on-site within the first 24 hours. No hospital arrived in Bam before the third day. Despite sending 25 surgeons, three field hospitals carried out only 15 operations, demonstrating that sending surgeons three to five days after impact is not cost effective.



Breakthrough in International Disaster Relief

❖ 2004, Indian Ocean Tsunami

- "Dejavu"
- Lack of record keeping; Duplication of aids
- Lack of matching aid to needs
- Lack of community engagement

→ "**Cluster Approach**" endorsed by

IASC (Inter-Agency Standing Committee) in 2005

CONCEPT OF FIELD HOSP.

Post-Tsunami, 2004

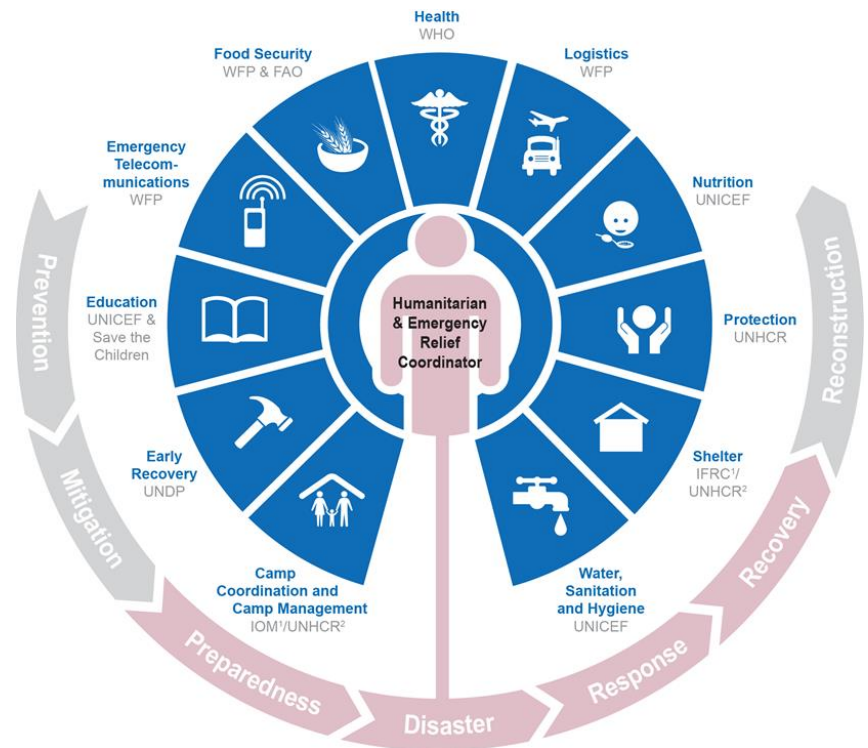
❖ **Humanitarian Reform** - Humanitarian Response Review (2005)

- UN, NGOs, Red Cross/Red Crescent, IOM
- Identified critical Gap areas

❖ **Global Cluster Approach**

- Addressing **gaps** and strengthening the **effectiveness** of humanitarian response through building partnerships
- **Clarifying** the division of labour among organizations, and better defining their **roles**
- Making the international humanitarian community **more structured, accountable and professional**

WHO (World Health Organization) is Leading agency of **GHC** (**Global Health Cluster**)





WHO-PAHO Guidelines
for the Use of
**Foreign Field
Hospitals**
in the Aftermath of
Sudden-Impact Disasters



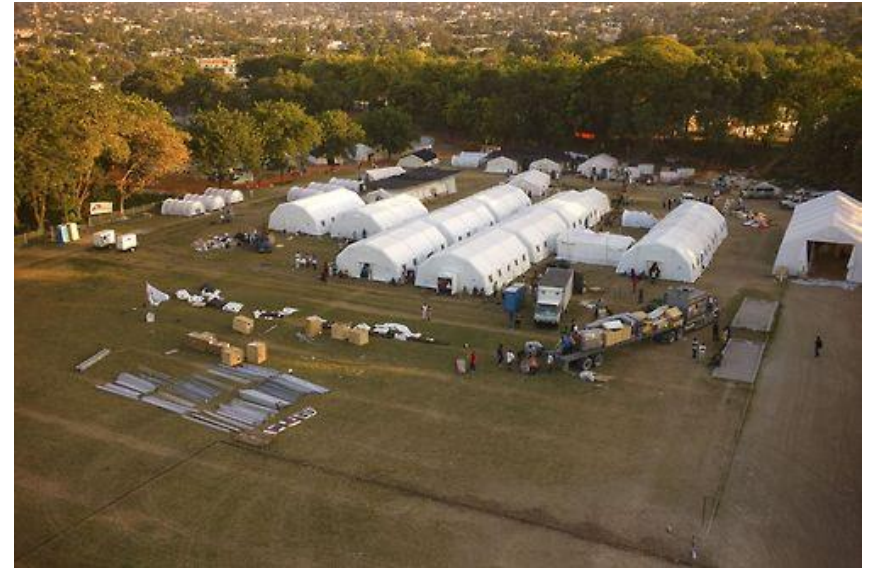
WHO-PAHO
Guidelines
for the Use of
Foreign Field Hospitals
in the Aftermath
of Sudden-Impact
Disasters

International meeting
Hospitals in Disasters—Handle with Care
San Salvador, El Salvador, 8–10 July 2003

IF SO, WHAT DO YOU NEED?

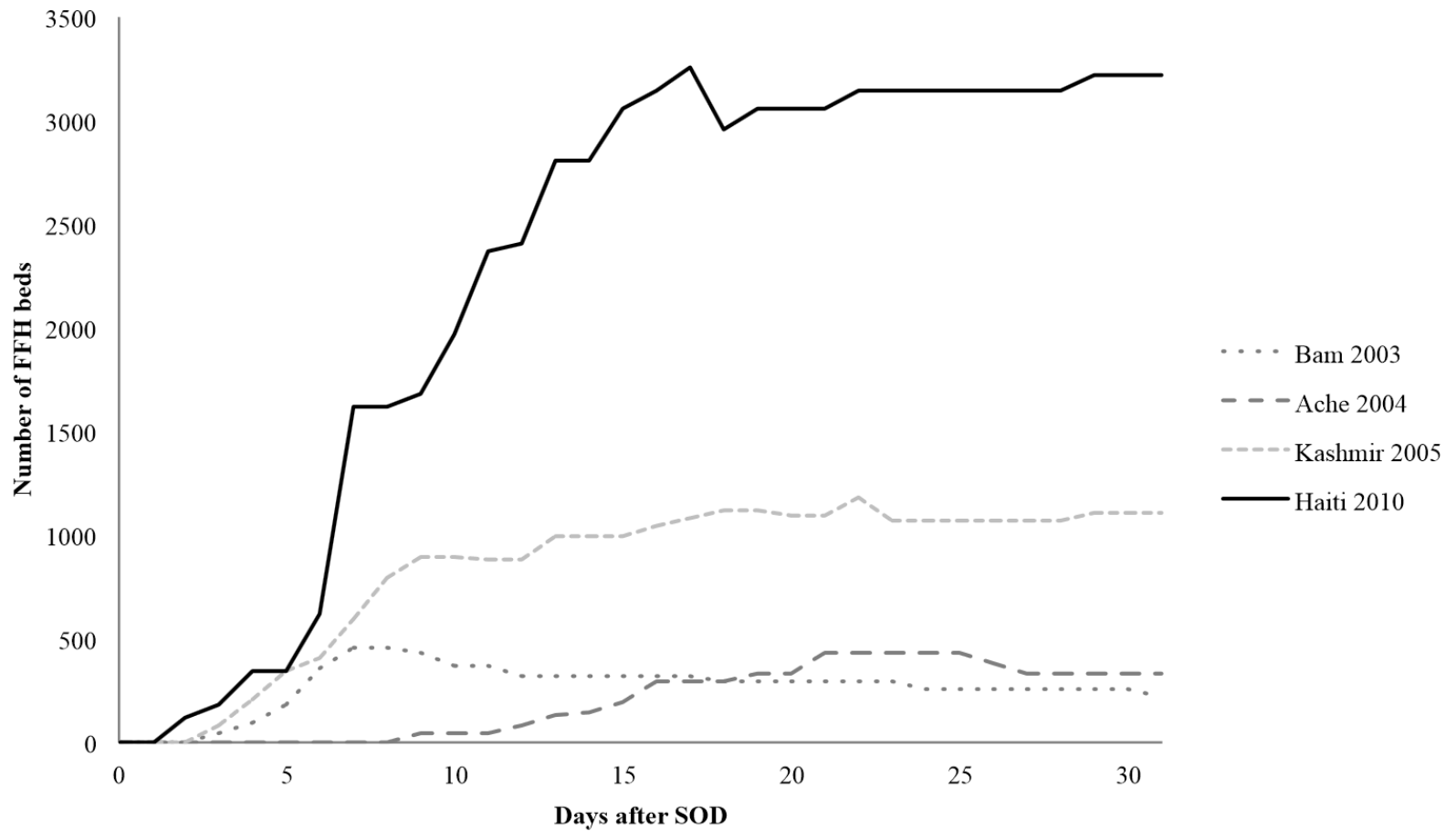


Case Review, Haiti (2010)



French field hospital in Haiti (2010)

Number of FFH beds in relation to time in four recent SOD

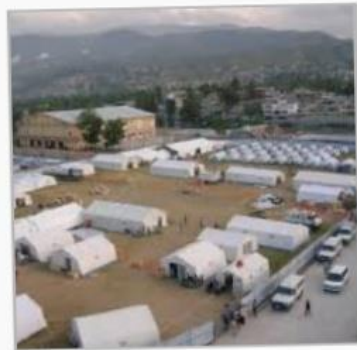


*SOD; Sudden onset disaster

From: Early Disaster Response in Haiti: The Israeli Field Hospital Experience



FMT in Haiti (2010)





KDRT in Haiti (2010)

Haiti Disaster Tourism—A Medical Shame

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Abstract

The devastating Haiti earthquake rightly resulted in an outpouring of international aid. Relief teams can be of tremendous value during disasters due to natural hazards. Although nobly motivated to help, all emergency interventions have unintended consequences. In the immediate aftermath of the earthquake, many selfless individuals committed to help, but was this really all in the name of reaching out a helping hand? This case report illustrates that medical disaster tourism is alive and well.

Van Hoving DJ, Wallis LA, Docrat F, De Vries S: Haiti disaster tourism—A medical shame. *Prehosp Disaster Med* 2010;25(3):201–202.

**WHAT GLOBAL STANDARDS
ARE NEEDED?**

Global Efforts

❖ Cuba meeting 2010

→ Foreign Medical Team working group created
(GHC endorsed, WHO hosted)

Aim to improve EMT response- Inclusive process.

→ 2 reports commissioned

- EMT Reporting, data collection

- Classification and standards for EMT

Proceedings of the WHO/PAHO
 Technical Consultation on
 Foreign Medical Teams (FMTs)
 Post Sudden Onset Disasters (SODs)

December 7 - 9, 2010

Havana, Cuba

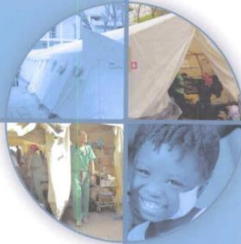


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**Registration and coordination of Foreign
Medical Teams responding to sudden onset
disasters**

The way forward

Foreign Medical Team Working Group

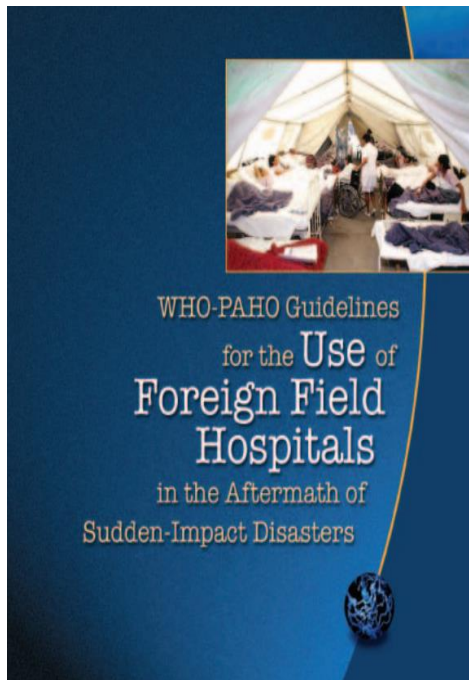
5 May 2013



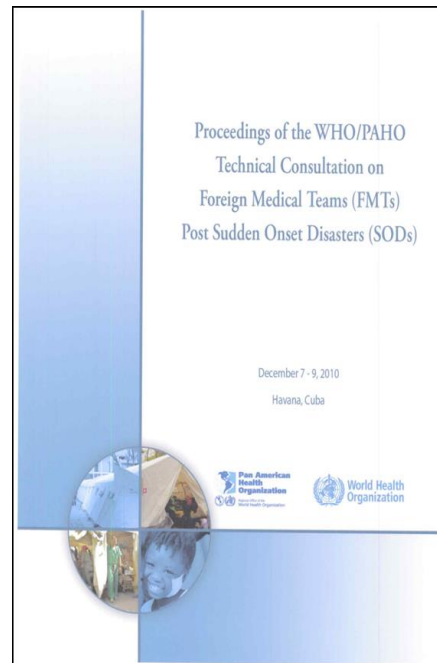
**CLASSIFICATION AND
MINIMUM STANDARDS
FOR FOREIGN MEDICAL
TEAMS IN SUDDEN ONSET
DISASTERS**

EMT guideline

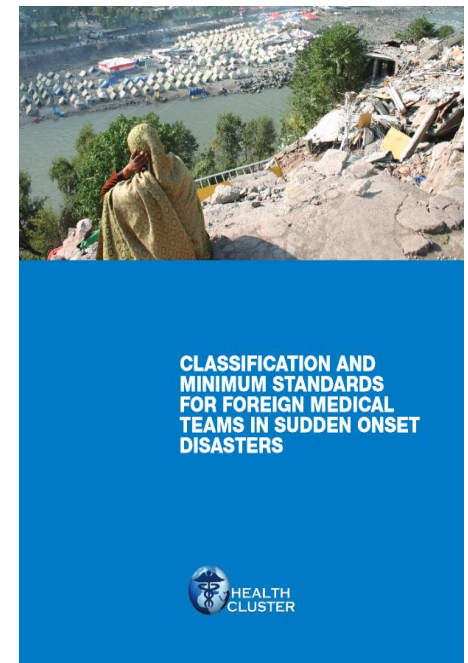
2003



2010



2013



WHO EMT Guideline (2013)

❖ USAR (Urban Search And Rescue)

Classification by INSARAG (UN OCHA)

International External Classification (IEC) system

Light / **Medium** / **Heavy**

❖ EMT (Emergency Medical Team) *no accreditation system yet*

Type 1: Outpatient Emergency Care

Type 2: Inpatient Surgical Emergency Care

Type 3: Inpatient Referral Care

Additional specialized care teams

The aim of the GHC EMT guidelines

- ❖ Simple classification system
- ❖ Registration from
 - Define type (1 fixed, 1 mobile, 2, 3 or specific specialities)
 - Capacities, Services, Minimum deployment standards

Date: _____
 Country/Agency: _____
 Recent deployment experience: _____
 Name and position of person reporting: _____
 Contact details: _____
 Agreement to comply with FMT guiding principles and standards: _____
 FMT Type: Please see reversed side for services and standards in order to determine FMT type

14

FMT Type	Outpatient capacity	Inpatient capacity	Surgical capacity	Length of stay	No. of international/local staff	Time to deploy	Estimated time to be operational	Logistics and support required	List services offered/ Field Hospital (Y/N)
1. Outpatient Emergency Care		Not applicable	Not applicable						
2. Inpatient Surgical Emergency Care									
3. Inpatient Referral Care									
Additional Specialised Care FMT		Embedded in FMT 2, 3 or local health service							

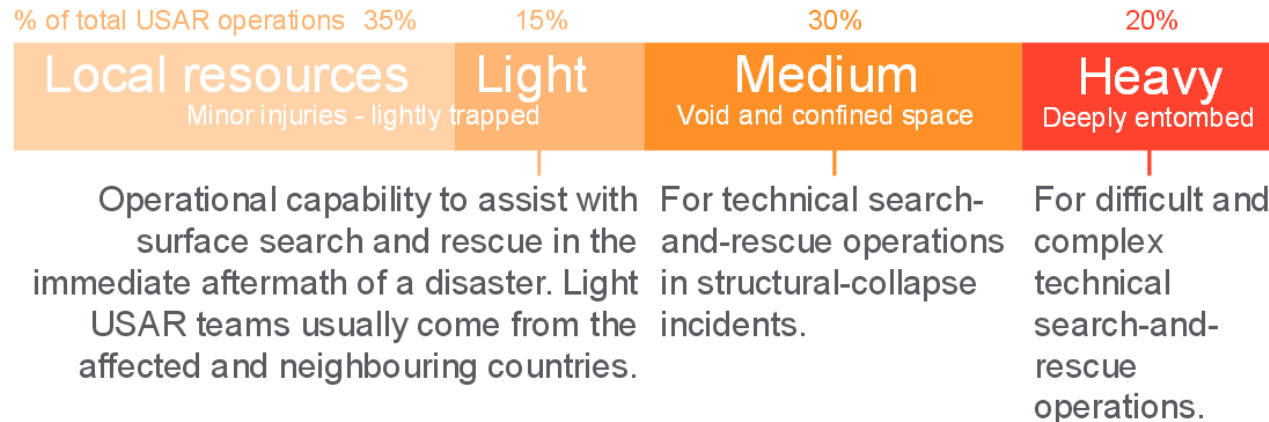
USAR classification

Professional USAR support

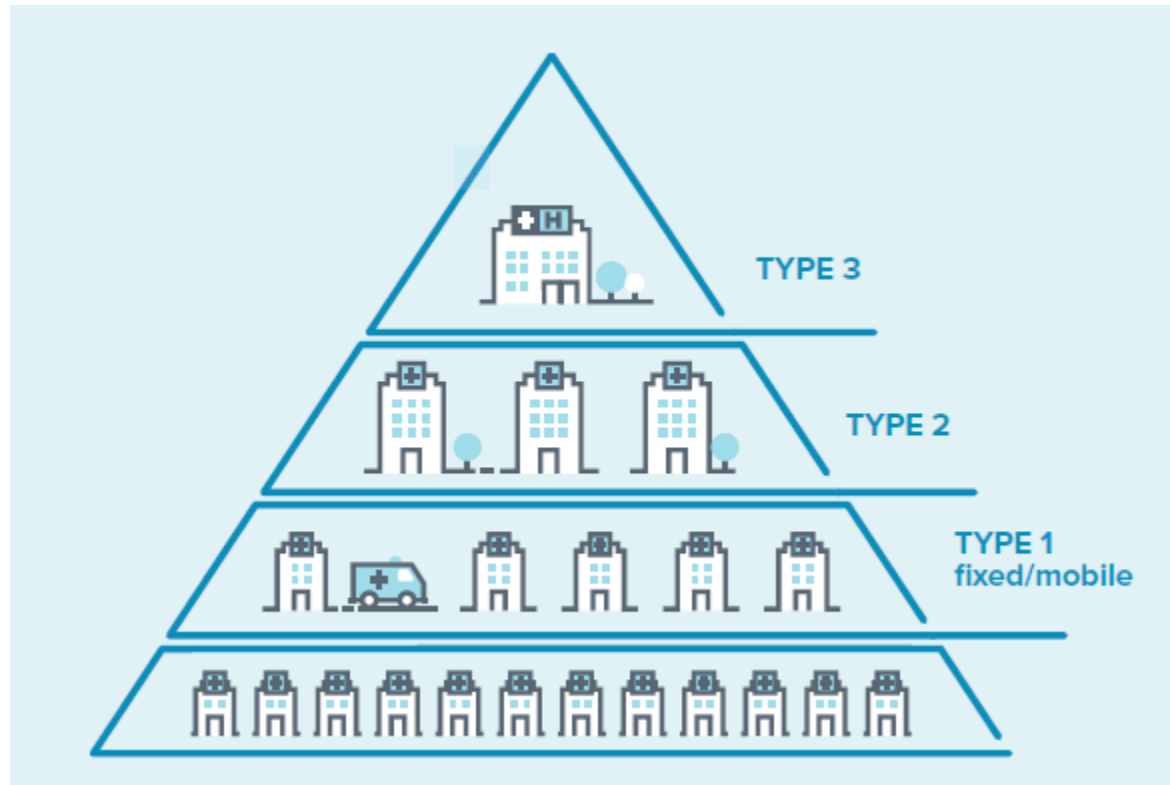
The INSARAG External Classification (IEC) system is designed to ensure that assisting countries send a team with the required skills and equipment, and that appropriate resources are assigned to the appropriate sites as soon as possible.



2005
External
Classification



EMT classification



International Medical Team/Foreign Field hospital

A field hospital

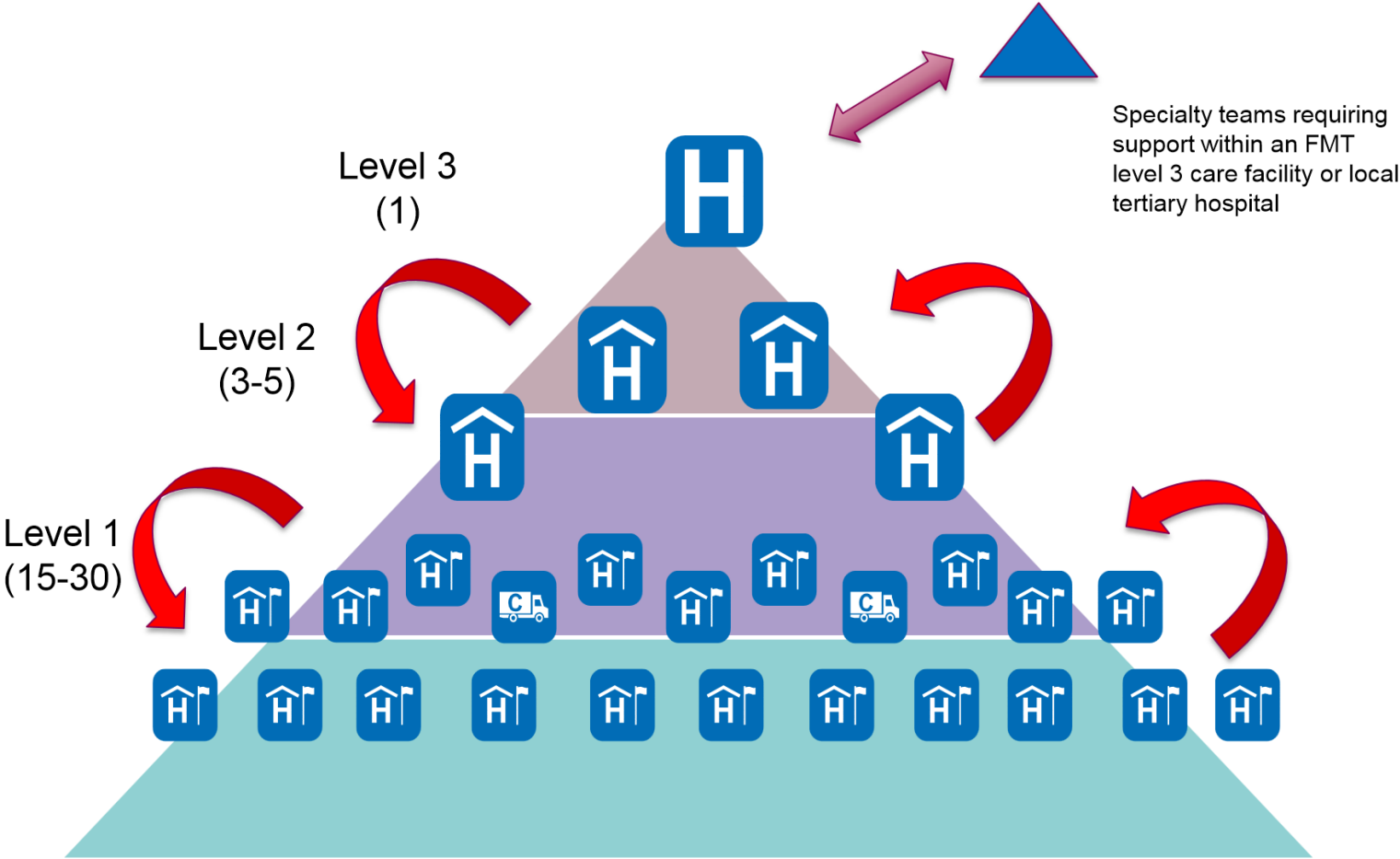


EMT (Emergency Medical Team)



REFERRAL SYSTEM/ CO-ORDINATION

Health system and levels of EMT care post SOD



Type of Field Hospital

분류	정의
Type 1	20 OPD/day, 5 inpatient for up to 2days
Type 2	3-4 OP/day, 20 inpatient, 1-2 ICU bed
Type 3	10 OP/day, 50 inpatients for up to 30 days

EMT types

❖ EMT type I Fixed: Outpatient Emergency Care

- At least 100 outpatients/day during daytime
- Function during day time rather than 24 hours
- Key services:
 - Triage, First Aid
 - Stabilisation and referral of severe trauma, nontrauma emergencies
 - Definitive care for minor trauma
- Working from suitable existing structures or supply their own fixed or mobile outpatient facilities (e.g., tents, special equipped vehicles.)

EMT types

- ❖ EMT type I Mobile: Outpatient Emergency Care
 - At least 50 outpatients/day during daytime
 - Function during day time rather than 24 hours
 - Key services:
 - Triage, First Aid
 - Stabilisation and referral of severe trauma, nontrauma emergencies
 - Definitive care for minor trauma
 - Moving throughout the mission deployment including all equipment

EMT types

❖ EMT type II: Inpatient Surgical Emergency Care

- 7 major or 15 minor operations daily with at least 20 inpatient beds for 24 hours
- Key services:
 - Advanced life support
 - Definitive wound and basic fracture management
 - Damage control surgery
 - Basic anaesthesia, X-ray, sterilisation, laboratory and blood transfusion
 - Rehabilitation services and patient follow up
- Type 2 EMTs should be available for at least 3 weeks but ideally longer.

EMT types

❖ EMT type III: Inpatient Referral Care

- Intensive care capacity
- At least 2 operating tables in two separate rooms within the theatre area, at least 40 inpatient beds (20 per table) and have the capability to treat 15 major or 30 minor surgical cases a day
- Key services:
 - Complex reconstructive wound and orthopaedic care
 - High level paediatric and adult anaesthesia
 - Intensive care beds with 24/7 monitoring and ability to ventilate
- Type 3 EMTs should be offered immediately, and upon agreement, deploy without delay, but are unlikely to be operational in the field for at least 5–7 days

EMT types

❖ **Additional Specialised Care Teams**

- additional specialised care embedded within type 2 or 3 EMTs or a national Hospital
- Specialised services
 - Burn Care
 - Dialysis and care of crush SD
 - Maxillo-facial surgery
 - Orthoplastic surgery
 - Intensive rehabilitation
 - Maternal health
 - Neonatal and paediatrics
 - Transport and Retrieval for critical ill patients

Principles and minimum standards

❖ **Principles** (Sphere, IDRL, Medical ethics)

❖ **Core standards**

- Team experience, capacity, management, data collection consent

❖ **Professional technical standards**

- Per level of care
- Per medical discipline (refer to professional agency standards)

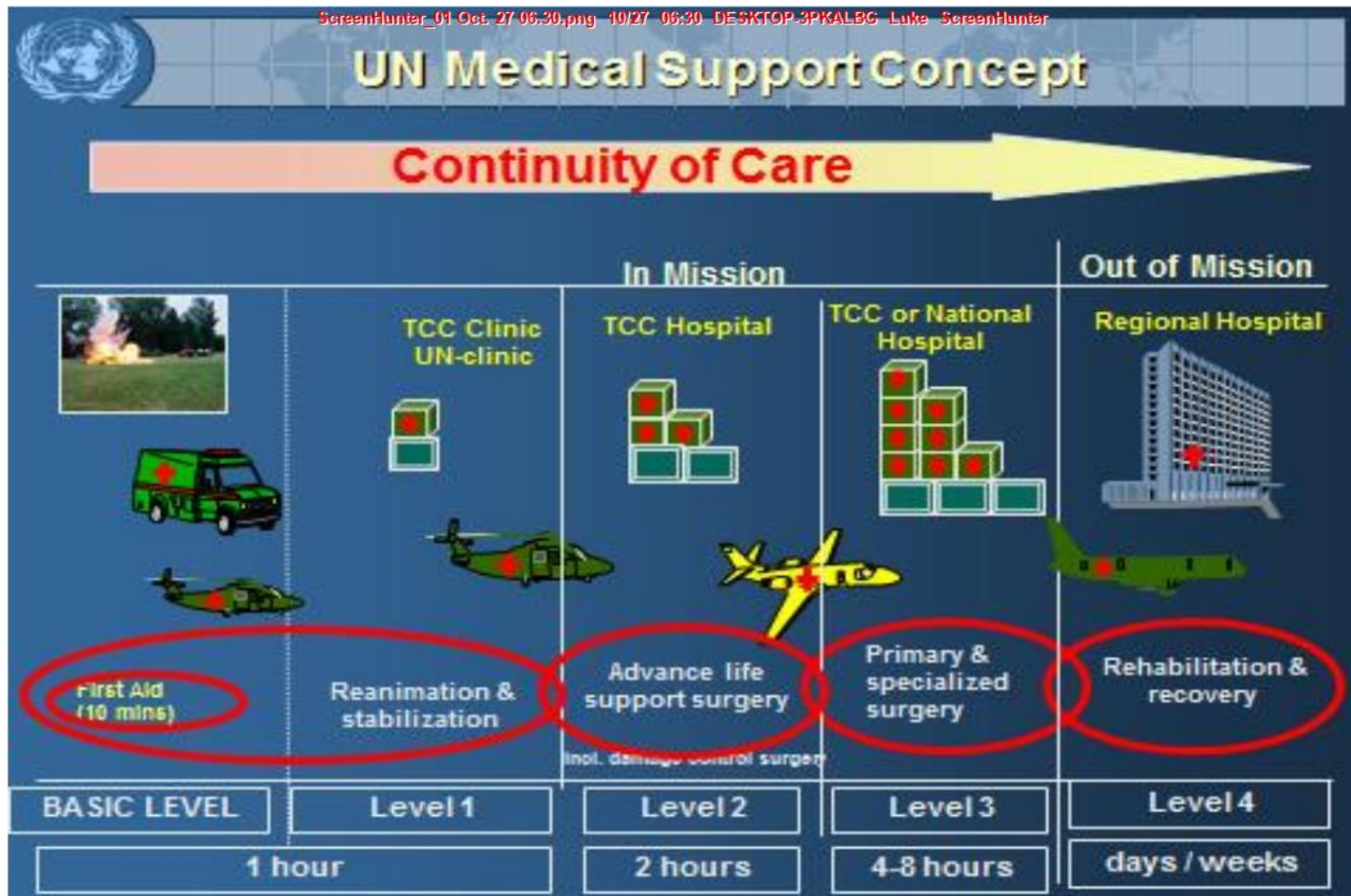
UN Medical Support

- ❖ Level 1. Primary health and emergency care;
 - We aim to stabilize the wounded
 - First aid, rescue, patient classification, resuscitation
- ❖ Level 2. Basic field hospital;
 - Provide surgical treatment and surgical intensive care
- ❖ Level 3. Advanced Field hospital;
 - Multidisciplinary surgical treatment

Minimum Standards per Service per Level of Care

	1	2	3
Initial assessment and triage	mass casualty and emergency triage	surgical triage	referral acceptance triage
Ressucitation	first aid , basic stabilization	Airway management without mechanical ventilation	Intensive care ressucitation
Wound care	Initial wound care	Full wound care: surgical debridement and burn care, basic flaps, grafts and skin grafts	Reconstructive wound care
Fracture management	Immobilization, PoP and traction devices	Conservation treatment of fraction by traction or PoP, external fixation, amputation	Internal fixation, bone graft, definitive fracture care
Patient stabilization and referral	adequate/inadequate, pathways, communication and documentation, accept/pass referrals	adequate/inadequate, pathways, communication and documentation, accept/pass referrals	adequate/inadequate, pathways, communication and documentation, accept referrals from level 2 and consider referrals to other countries (context, ability to return home)
Communicable disease care	outpatient mangemet and/or referral of diseases such as pneumonia, diarrheal, malaria, etc...	inpatient mangemet and/or referral of diseases such as pneumonia, diarrheal, malaria, etc...	Level 2+ ICU management

UN Medical Support



BUT,,,IN REAL SITUATION?



DEVELOPING STORY

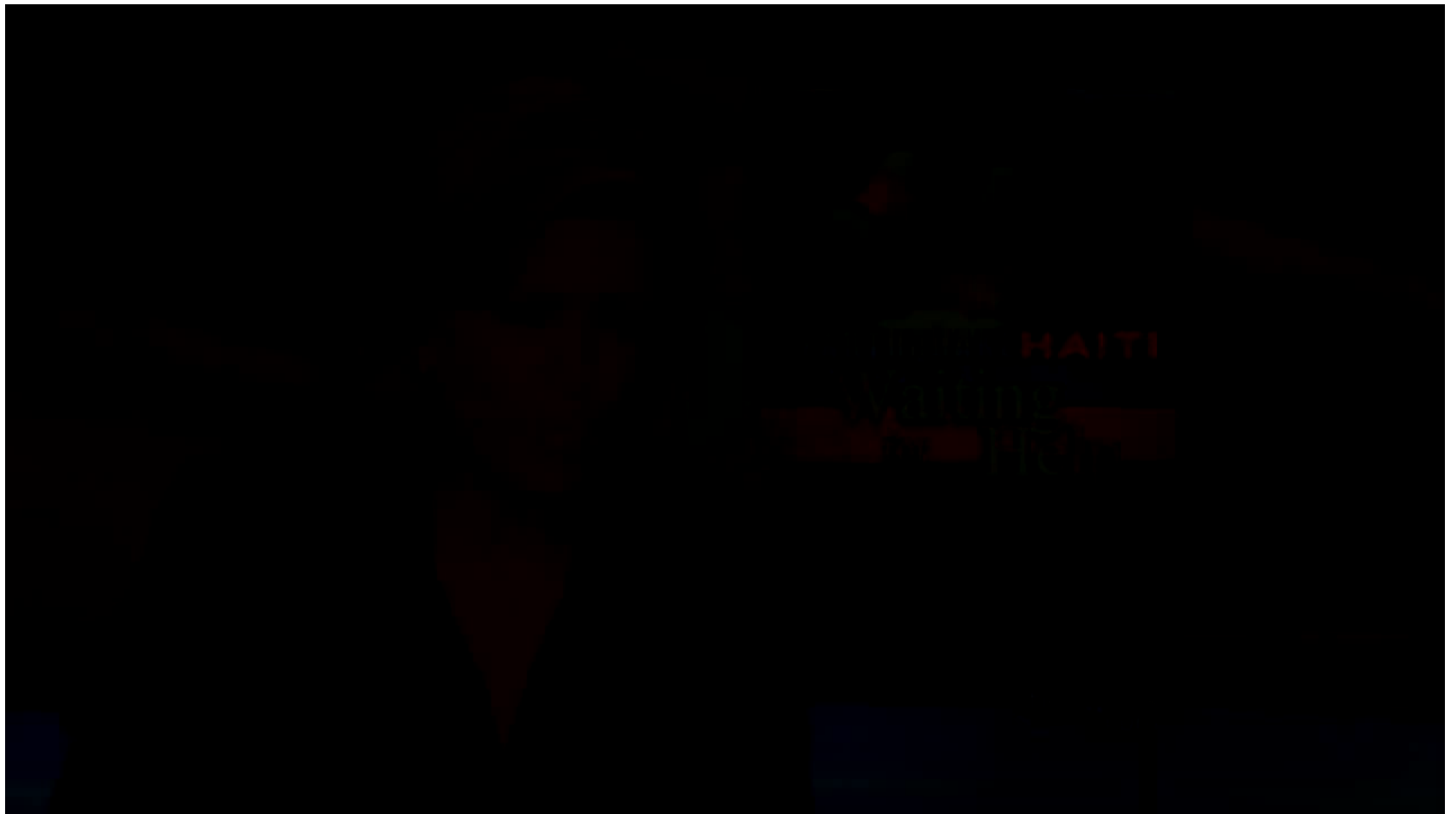
CRITICAL CARE IN HAITI
Field hospitals filling the void

HAITI
EARTHQUAKE

CNN

UPDATE 16 American deaths confirmed after quake

10:25 AM ET



KDRT Experience : Myanmar Cyclone Nargis (2008)



- Capacity: less than Type 1 EMT
- Not engaged in coordination mechanism (ASEAN)
- Cooperated with local MOH office

KDRT Experience: Haiti Earthquake (2010)



- ❖ Capacity: less than Type 1 EMT
- ❖ Not participated in Health Cluster meeting
- ❖ Some NGOs with coordination (MCH hospital, Surgery team)

KDRT in Philippine: Typhoon Haiyan (2013)



- ❖ Capacity: Type 1 EMT
- ❖ Daily participated in Health Cluster meeting
- ❖ Collaborated with local resources (St. Paul hospital, Davao team)



KDRT in Nepal: Earthquake (2015)

- ❖ Capacity: Type 2 EMT
- ❖ Daily participated in Health Cluster meeting
- ❖ Collaborated with local resources (Korea Nepal Friendship Hosp)



KDRT in LAOS: Dam Collapsed (2018)

- ❖ Capacity: Type 1 EMT
- ❖ Deployment some of the hospital equipment

GLOBAL CLASSIFICATION PROCESS

Global Classification Process

Apply for New User Account on (WHO)



Submit an Expression of Interest (EMT registry)



Peer-Review of Self-Declared Information



Site Visit Validation



Quality Assurance Process

Global Classification Process

Chinese Public Health Emergency Team



Current and Future



KDRT (2013)

MMH in Korea (2017)

< 소생용급실 >



< 수술실 >



< 관찰용급실 >



< 중환자실 >



Thank you for attention!



❑ 좌측부터 김준규 중앙119구조단장, 민동석 외교통상부 제2차관, 이기환 소방방재청장, Nihan Erdogan 국제구조탐색자문단 사무국 담당관, David Norfin IEC 평가단장, Alan Toh IEC 멘토

